

## IUBMB Enzyme Nomenclature

## EC 3.2.1.96

**Common name:** mannosyl-glycoprotein endo- $\beta$ -*N*-acetylglucosaminidase

**Reaction:** Endohydrolysis of the N,N'-diacetylchitobiosyl unit in high-mannose glycopeptides and glycoproteins containing the -[Man(GlcNAc)<sub>2</sub>]Asn-structure. One *N*-acetyl-D-glucosamine residue remains attached to the protein; the rest of the oligosaccharide is released intact

**Other names:** *N,N'*-diacetylchitobiosyl  $\beta$ -*N*-acetylglucosaminidase; endo- $\beta$ -*N*-acetylglucosaminidase; mannosyl-glycoprotein endo- $\beta$ -*N*-acetylglucosaminidase; di-*N*-acetylchitobiosyl  $\beta$ -*N*-acetylglucosaminidase; endo- $\beta$ -acetylglucosaminidase; endo- $\beta$ -(1 $\rightarrow$ 4)-*N*-acetylglucosaminidase; mannosyl-glycoprotein 1,4-*N*-acetamidodeoxy- $\beta$ -D-glycohydrolase; endoglycosidase S; endo-*N*-acetyl- $\beta$ -D-glucosaminidase; endo-*N*-acetyl- $\beta$ -glucosaminidase; endo- $\beta$ -*N*-acetylglucosaminidase D; endo- $\beta$ -*N*-acetylglucosaminidase F; endo- $\beta$ -*N*-acetylglucosaminidase H; endo- $\beta$ -*N*-acetylglucosaminidase L

**Systematic name:** glycopeptide-D-mannosyl-*N*<sup>4</sup>-(*N*-acetyl-D-glucosaminyl)<sub>2</sub>-asparagine 1,4-*N*-acetyl- $\beta$ -glucosaminohydrolase

**Comments:** A group of related enzymes.

**Links to other databases:** [BRENDA](#), [EXPASY](#), [KEGG](#), [WIT](#), CAS registry number: 37278-88-9

**References:**

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2. Koide, N. and Muramatsu, T. Endo- $\beta$ -*N*-acetylglucosaminidase acting on carbohydrate moieties of glycoproteins. Purification and properties of the enzyme from *Diplococcus pneumoniae*. *J. Biol. Chem.* 249 (1974) 4897-4904. [Medline UI: [74288197](#)]
3. Pierce, R.J., Spik, G. and Montreuil, J. Cytosolic location of an endo-*N*-acetyl- $\beta$ -D-glucosaminidase activity in rat liver and kidney. *Biochem. J.* 180 (1979) 673. [Medline UI: [80020233](#)]
4. Pierce, R.J., Spik, G. and Montreuil, J. Demonstration and cytosolic location of an endo-*N*-acetyl- $\beta$ -D-glucosaminidase activity towards an asialo-*N*-acetyl-lactosaminic-type substrate in rat liver. *Biochem. J.* 185 (1980) 261-264. [Medline UI: [80197728](#)]
5. Tai, T., Yamashita, K., Ogata-Arakawa, M., Koide, N., Muramatsu, T., Iwashita, S., Inoue, Y. and Kobata, A. Structural studies of two ovalbumin glycopeptides in relation to the endo- $\beta$ -*N*-acetylglucosaminidase specificity. *J. Biol. Chem.* 250 (1975) 8569-8575. [Medline UI: [76069208](#)]
6. Tarentino, A.L., Plummer, T.H., Jr. and Maley, F. The release of intact oligosaccharides from specific glycoproteins by endo- $\beta$ -*N*-acetylglucosaminidase H. *J. Biol. Chem.* 249 (1974) 818-824. [Medline UI: [74288197](#)]